

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) A method of manufacturing a magnetic material comprising:

colliding a molten alloy to a circumferential surface of a cooling roll to cool and then solidify the molten alloy; and

producing a ribbon-shaped magnetic material having an alloy composition represented by the formula of $R_x(Fe_{1-y}Co_y)_{100-x-z}B_z$ (where R is at least one rare-earth element, X is 10 - 15 at%, y is 0 - 0.30, and z is 4 - 10 at%); and

expelling gas entered between the circumferential surface of the cooling roll and a puddle of the molten alloy, wherein gas expelling means on the circumferential surface of the cooling roll are defined by at least one groove with an average width of 0.5 – 90 μm to prevent the molten alloy from entering the at least one groove, and the groove is formed spirally with respect to the rotation axis of the cooling roll.

2. (Original) The method as claims in claim 1, wherein the cooling roll includes a roll base and an outer surface layer provided on an outer peripheral portion of the roll base, and said gas expelling means is provided in the outer surface layer.

3. (Previously Presented) The method as claimed in claim 2, wherein the outer surface layer of the cooling roll is formed of a material having a heat conductivity lower than the heat conductivity of the structural material of the roll base at room temperature.

4. (Previously Presented) The method as claimed in claim 2, wherein the outer surface layer of the cooling roll is formed of a ceramic

5. (Previously Presented) The method as claimed in claim 2, wherein the outer surface layer of the cooling roll is formed of a material having a heat conductivity equal to or less than $80 \text{ Wm}^{-1}\text{K}^{-1}$ at room temperature.

6. (Previously Presented) The method as claimed in claim 2, wherein the outer surface layer of the cooling roll is formed of a material having a coefficient of thermal expansion in the range of $3.5 - 18 [\times 10^{-6}\text{K}^{-1}]$ at room temperature.

7. (Previously Presented) The method as claimed in claim 2, wherein an average thickness of the outer surface layer of the cooling roll is 0.5 to $50 \mu\text{m}$.

8. (Previously Presented) The method as claimed in claim 2, wherein an outer surface layer of the cooling roll is manufactured without experiencing a machining process.

9. (Previously Presented) The method as claimed in claim 1, wherein a surface roughness Ra of a portion of the circumferential surface where the gas expelling means is not provided is 0.05 - 5 μ m.

10. – 11. (Cancelled)

12. (Previously Presented) The method as claimed in claim 1, wherein the average depth of the groove is 0.5 -20 μ m.

13. (Previously Presented) The method as claimed in claim 1, wherein the angle defined by the longitudinal direction of the groove and the rotational direction of the cooling roll is equal to or less than 30 degrees.

14. (Cancelled)

15. (Previously Presented) The method as claimed in claim 1, wherein the at least one groove includes a plurality of grooves which are arranged in parallel with each other through an average pitch of 0.5 – 100 μ m.

16. (Previously Presented) The method as claimed in claim 1, wherein the groove has openings located at the peripheral edges of the circumferential surface.

17. (Previously Presented) The method as claimed in claim 1, wherein the ratio of the projected area of the groove or grooves with respect to the projected area of the circumferential surface is 10 - 99.5%.

18. (Original) The method as claimed in claim 1, further comprising a step of milling the ribbon shaped magnetic material.